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GSTP, THE STRUCTURE OF PROTECTION AND SOUTH-SOUTH
TRADE IN MANUFACTURES

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GSTP, THE STRUCTURE OF PROTECTION AND
SOUTH-SOUTH TRADE IN MANUFACTURES

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ABSTRACT

In the light of endeavours for a Global System of Trade Preferences (GSTP) among developing countries, this article is concerned with the extent and structure of trade control measures in developing countries against imports of manufactures. More specifically, tariff charges, specific tariffs and quantitative restrictions are examined in selected developing countries. The analysis suggests that, given the present extent and structure of trade control measures in developing countries, a GSTP will probably create too little effective preferential margins to stimulate new South-South trade in manufactures. This seems to be especially true of the stimulation of South-South trade in capital goods, a major ground in the pleas for a preferential trading scheme among developing countries.

GSTP, THE STRUCTURE OF PROTECTION AND SOUTH-SOUTH TRADE IN MANUFACTURES

1. Introduction

Developing countries' efforts to strengthen economic co-operation among themselves date from the 1960s. The early efforts largely aimed at the establishment of (sub-)regional economic integrations. In 1976, however, the Group of 77 launched the general principle of collective-self-reliance as an overall development strategy, thereby widening the scope to embrace co-operation at an interregional level. A major element in the collective-self-reliance concept is the creation of a preferential trading scheme among developing countries, known as the Global System of Trade Preferences (GSTP). In successive stages, the GSTP has since then matured and concretized. GSTP has been vividly pursued and actively supported by UNCTAD virtually from its inception (UNCTAD, 1986).

The recent policy interest in the promotion of South-South trade is based on the wide-spread idea that the "engine of growth" of South-North trade is slowing down, due to slackening economic growth and increasing protectionism in the North (Lewis, 1980). South-South trade should become an alternative source of self-sustained growth in developing countries. A significant role is destined for the capital goods sector. The more advanced developing countries are expected to provide technologies and products more appropriate for developing countries, and probably cheaper, than the traditional sources of supply in the North. By setting on a process of import substitution for capital goods in the South, the capital goods sector may act as a generator and transmitter of skills and technology among developing countries. The efficiency of this import-substitution process is served by specialization and by output levels surpassing a minimum scale of production. This can be realized by increasing South-South trade in capital goods. A GSTP among developing countries should give this trade a competitive edge (Lall, 1985).

The first round of negotiations on GSTP went underway in 1987, in principle attended by about 70 countries. This first round is characterized by a cautious disposition and modest objectives. The

starting point is a limited initial linear tariff reduction of 10 to 20 per cent. This basic approach, however, is amended by quite a number of provisions and adaptations (UNCTAD, 1980). General provisions are included in favour of least developed countries, while specific provisions are envisaged for sensitive products. Safeguard clauses for unforeseen difficulties or balance-of-payments problems are also envisaged. Supplementary negotiations seem necessary to arrive at a balancing of concessions. In this connection, non-tariff barriers (NTBs) should be closely interrelated with tariff negotiations, as the GSTP should not only rely on tariff concessions. In fact, the first round boils down to a combination of a linear approach and complicated and time-consuming product-by-product negotiations. To avoid invalidation of tariff concessions, at least a standstill is suggested in the area of NTBs.

In the light of a GSTP, this study is concerned with the extent and structure of trade control measures (TCMs) in developing countries against imports of manufactures. Transnationally, both tariff charges and quantitative restrictions (QRs) are examined in selected developing countries.

2. Determinants of Protection in Developing Countries

Since World War II, developed countries have, in the framework of multilateral trade negotiations under auspices of the GATT, increasingly freed their mutual trade from TCMs, especially in the field of tariffs. After the Tokyo Round negotiations, concluded in 1979, simple average tariffs on imports of semi-finished and finished manufactures were 6.6 per cent in the United States and the European Community and 6.4 per cent in Japan (Balassa and Balassa, 1984, p. 181). Tariffs on import trade with developing countries were generally higher than on trade among developed countries. Recently, however, the developed countries came to a turning-point in their trade policies by starting to extent import restrictions. Generally, these restrictions have taken the form of NTBs to protect domestic suppliers against increased import competition of manufactures from especially Japan and the newly industrializing countries. The renewed introduction of

protectionist measures in the developed countries has brought about a growing interest by economists in what is referred to as the political economy of protection (Frey, 1985). In this line of approach, the inter-industry structure and the level of protection in an economy is the result of the interplay of market forces in the political market for protection. Actors in this market are, on the one hand, particular interest groups and associated groups of voters, and on the other hand, politicians and officials who seek to maximize their public support through the ballot box. Empirical research to explain prevailing inter-industry structures of protection in developed countries has identified that import-competing industries which have a comparative disadvantage are likely to receive a higher rate of protection (Cline, 1984, App.C; Anderson and Baldwin, 1981).

There are several reasons to assume that the inter-industry structure and level of protection prevailing in developing countries cannot adequately be understood with the political market model for protection. This can, first of all, be attributed to a fundamental difference in protectionist pressures between developed and developing countries. The new protectionism of recent years in developed countries is principally defensive in nature. Since World War II, developing countries erected protective barriers around their domestic markets to establish manufacturing industries which were hardly developed yet at that time. The protection of domestic industry inherent to this import-substitution strategy of industrialization could be justified by the infant-industry argument. Protection of this kind can very well be characterized as principally offensive by nature. This is not to say that no defensive forces are present in the protected import-substitution sectors in developing countries nowadays. After a satisfying growth record of manufacturing output during the 1950s and 1960s, the domestic market of light manufactures in a growing number of developing countries began to show signs of saturation. The further development of light industry became impeded by the limitations of the domestic market, especially so in smaller developing countries. This necessitated a reconsideration of industrialization strategy. In some developing countries the call for both higher protection and a more made-to-measure system of protection was met, whether or not in

combination with a higher level of protection for intermediate and producer goods industries. The latter implies extending the import-substitution strategy to the second phase, a policy option that is economically only feasible for the larger countries, due to important economies of scale that are characteristic for these production processes. An increasing number of especially smaller developing countries has sought to embark on an export-oriented industrialization strategy. By far in most cases, however, this policy shift has been partial: industries producing for the domestic market still continue to produce under import-substitution conditions, whereas the inherent discrimination against exports is reduced via subsidies and a duty-free import of intermediates and capital goods (Verbruggen, 1987, Chs. 11-17). Generally, protectionist policies in developing countries tend to become ever stronger, pervasive and diverse during the postwar period. Once a protected domestic market has come into existence, vested interests that depend on the continuance of protection are created with the advance of time. An initially offensive policy can therefore very well turn into a defensive one if protection has been afforded long enough.

Second, especially in developing countries, balance-of-payments policies and industrial development policies are often strongly interrelated (Gorden, 1980). In many a developing country, the imposition of import-restraining devices to cope with an alarming balance-of-payments deficit laid the basis for what later became a more elaborate policy to foster industrial development. This was initially not intended, but the TCMS remained and provided protection for industrial activities. A set of TCMS usually constitutes an integral part of an industrial development strategy once this has been explicitly formulated. But again, recurrent balance-of-payments problems may induce additional TCMS which in turn afford additional protection. Protection that is achieved as a by-product of balance-of-payments considerations does not necessarily fit in with the industrial development objectives. In developing countries, TCMS to rectify balance-of-payments problems especially put a quantitative limit on imports of non-essentials or luxury goods.

Third, unlike in developed countries, tariff revenues constitute

an important part of public revenue in many developing countries. At lower levels of development, taxing both import and export trade is often the least costly way of tax collection, due to the underdevelopment or inefficiency of a tax collection system (Corden, 1978, Ch. 4; Greenaway, 1981). Therefore, governments in such countries may pursue a specific trade policy for revenue purposes only, or at least with less attention to the economic consequences of the trade intervention measures.

Fourth, governments in developing countries often reduce the level of trade because of a mixture of political, ideological and economic-strategic reasons. These so-called non-economic arguments for protection are by no means a prerogative of developing countries only, but some of these are indeed especially applicable to their problems (Corden, 1978, Ch. 11; Bhagwati and Srinivasan, 1983, Ch.24). For instance, the instability of export receipts from primary commodities as well as the supposed downward trend in the commodity terms of trade of developing countries warrant a strategy to reallocate resources out of primary production and hence protection of manufacturing. In more general terms, many developing countries seek or have sought an increasing self-sufficiency in order to reduce external dependence, to minimize the impact of external shocks on the domestic economy, to give the development of indigenous technology a better chance, or to meet other more ideological objectives to partially withdraw from the world economy as such. Furthermore, production in certain sectors may be provided with additional protection in the framework of a national food strategy, like the domestic production of fertilizers or agricultural machinery. The same goes for industries involved in the production of military goods for the sake of national defence. Finally, it is a common practice in developing countries to reduce luxury consumption, either by consumption taxes or import barriers, or both. The motivation often stems from balance-of-payments considerations, but not infrequently ideological or religious grounds also play a role. The sometimes heavy taxation of alcoholic beverages and tobacco is a case in point.

In sum, the above considerations suggest that the grounds for protection in developing countries may be rather different from those

in the developed countries; in fact, the arguments used in developing countries in favour of protection may even be mutually inconsistent.

3. Measuring TCMs

Also if we limit ourselves to concrete trade barriers, that is to say to deliberately and publicly introduced and 'visible' TCMs, their diversity is impressive. A list of TCMs to be found in practice is never complete. For that reason, TCMs are commonly analyzed by type of measure. Various classifications are in use by international organizations and for analytical purposes, and not all of them are readily comparable. In this study, use will be made of a classification designed by the Trade Information System of UNCTAD. This classification distinguishes 22 main types of TCMs, both import and export control measures; see appendix A. The import control measures include tariff charges, additional fiscal charges, service charges and sales taxes levied at importation, QRs, money and finance measures, state trading monopoly, preferential trading arrangements and special entry procedures. These measures, which apply usually at a product level, are all intended to affect the volume, structure and direction of trade flows. Yet, these measures vary strongly in nature and effect; the direction of the effect of some is even unknown beforehand.

Only a restricted selection of the most unambiguously trade-restraining TCMs included in UNCTAD's Trade Information System will be investigated in this paper. This means an examination of the categories of tariff charges and QRs. These categories comprise the following measures (UNCTAD, 1984, pp. 6-8).

Tariff charges

1. Customs duties
2. Fiscal duties

Quantitative restrictions

1. Restrictive licensing
 - 1.1 Exceptional licence for goods normally prohibited
 - 1.2 Licence covering specified commodities and granted if administrative requirements are met
 - 1.3 Licence covering specified commodities and granted on a case-by-case basis

- 1.4 Licence conditioned by purchase of local goods
- 1.5 Licence for imports from specified partner countries
- 1.6 Licence conditioned by the availability of external financing
2. Quotas
 - 2.1 Product quotas
 - 2.2 Country quotas
 - 2.3 Tariff quotas
 - 2.4 Quotas linked with export performance
 - 2.5 Seasonal quotas
 - 2.6 Quotas n.e.s.
3. Prohibitions
 - 3.1 Total prohibition
 - 3.2 Seasonal prohibition (agricultural products)
 - 3.3 Temporary prohibition
 - 3.4 Prohibition with exception for selected countries
 - 3.5 Prohibition for commercial purposes
 - 3.6 Prohibition for certain areas of the importing country
 - 3.7 Prohibition of imports from specified countries

Among other TCMs, the Trade Information System provides per country tariff charges and QRs on the tariff line level according to the classification scheme of the Brussels Tariff Nomenclature, the CCCN code, see Appendix B. This very disaggregated level involves a great many items, per country ranging from 1,600 to 7,700 for manufactures only.

To begin with, average ad valorem tariff charges on imports of manufactures are calculated. There are two main types of import tariffs. One is the ad valorem tariff rate which raises the price of the import in the domestic market with the height of the tariff rate, usually expressed as a fixed percentage of the import price. The other is the specific tariff rate, aiming at the same effect as an ad valorem tariff but expressed as a fixed rate per physical unit of the import. In most countries, both types of import tariffs are applied and in some countries the tariff is even composed of two parts, namely a specific one that usually adds to an ad valorem rate. All tariff lines that are effected by a specific rate, or by both an ad valorem and a specific rate, are excluded from the averaging. These types of tariffs are examined with the method of measurement for QRs described below.

When both unweighted and import-weighted average tariffs are calculated, the well-known qualifications have to be made here. In

using unweighted tariff averages, an equal weight is given to all tariff line entries. Weighting by the country's own product composition of output or value added is preferable, but simply out of the question due to lack of production data on such a disaggregated level. The alternative of weighting by the country's composition of import is indeed possible, but yields downward-biased estimates. Implicitly, high tariff rates are then given small weights and low tariff rates large weights, as high tariffs will generally be associated with lower imports and vice versa. Two indices will be used to gauge the impact of QRs on developing countries' import trade. The first index is a simple frequency index, showing the frequency of incidence at the tariff line level of a particular QR for a certain product category. The index is expressed as a percentage that gives the share of the total number of tariff lines comprising a certain product group affected by a QR, thus

$$(1) \quad FI^{\alpha}_j = \frac{\sum_i TL_{ij}}{TL_j} \cdot 100$$

where FI^{α}_j is the frequency index for NTB α , TL_{ij} refers to a CCCN tariff line classified in product group j which is subject to NTB α , and TL_j refers to the total number of CCCN tariff lines included in product group j .

The second index meets the obvious limitation of the frequency index, namely that it provides no insight into the volume or value of import trade that is actually affected by a QR. When the tariff lines subject to a QR are weighted by the corresponding trade flow, a coverage index is formulated that gives the percentage share of imports of a certain product group covered by a QR:

$$(2) \quad CI^{\alpha}_j = \frac{\sum_i TL_{ij} M_{ij}}{M_j} \cdot 100$$

where CI^{α}_j is the coverage index for NTB α , M_{ij} is the import of product ij according for the 4 or 5-digit SITC classification that

corresponds to TL_{ij} , and M_j refers to total import trade of product group j .

The weighting procedure in calculating import-weighted average tariffs and coverage indices can only be properly carried out if import data are available at the SITC 4 and 5-digit level, to facilitate a close matching of the CCCN and SITC classifications, see Appendix B. This requirement substantially reduces the number of countries for which weighted measures can be computed.

The foregoing measures do not indicate the impact of TCMs on economic variables, like prices, consumption, production and trade, nor the economic costs arising from probable distortions of these variables. What they do provide is an indication of the severity of trade restrictions which they entail by showing, in terms of countries and product groups, the average heights of tariff rates and frequency of occurrence and trade coverage of QRs. It will be clear that the value of the coverage index for QRs provides quite ambiguous information. The index is based on the observed import value which is, of course, disturbed by the mere application of a QRs.

4. Empirical Analysis

For the purpose of this article, two levels of aggregation are distinguished. First, total trade in manufactures is defined as to comprise all products in ISIC Major Division 3 Manufacturing; see Appendix B. Tradeables are thus classified by industrial origin. Second, total manufactured trade is disaggregated into a five-sector classification, comprised the major product groups of nondurable consumer goods, beverages and tobacco, durable consumer goods, intermediates, and capital goods.

The following variables will be used in a cross-country regression analysis to grasp the variation in tariff heights per country. To begin with, the level of development, approximated by GNP per capita, is thought to affect the height of tariff protection in two ways: (1) the lower the level of development, the greater will be a country's productivity disadvantage and hence the higher the need for protection; (2) the lower the level of development, the poorer will be a country's

fiscal and administrative infrastructure and the more important will tariffs be as a source of governments revenue. The expected sign in both instances is negative.

Second, the variable population (POP) measures a country's domestic market size. The impact of this variable on the tariff height can also be twofold, but then in opposing directions. On the one hand, a large domestic market size enables a country to continue longer with the strategy of import substitution by moving to a second stage, whereas smaller countries sooner reach the limits of their domestic market. Hence, larger countries can afford a higher level of protection for a longer period, and can also better afford the protection of domestic production of intermediates and producer goods, than smaller countries. According to this reasoning, the expected relationship between tariff protection and domestic market size is positive. On the other hand, however, a smaller domestic market size hardly allows the realization of economies of scale and if adequate protection of manufacturing is to be provided, tariffs would have to be relatively high to make up for the larger price difference vis-à-vis foreign competitors (Corden, 1980, p. 68). In addition, smaller economies do not enjoy the advantage of natural protection in the form of high internal transport costs. This again calls forth higher tariff protection. Thus, in this context, the variable POP can be expected to have a coefficient with a negative sign.

Third, tariff protection aims at reducing the value of competitive imports. It is however well-known that protection also reduces the value of exports through its inherent home-market bias in production. The variable E_m/VA_m , the share of manufactured exports in total manufacturing value added, represents the national preference for a specific level of trade, for whatever reason. This variable is not strictly exogenous, as the relation may well be the other way around.

Also by means of a cross-country regression analysis, it will be tested whether the average tariff levels for the five distinguished major manufacturing product groups deviate significantly from one another. Given the stages in the import-substitution process, it is expected that, at lower levels of economic development, the tariff levels for consumer goods will be significantly higher than those for intermediate and capital goods.

5. Rates of Nominal Protection

The tariff charges that are examined in this section include the customs and fiscal duties on imports which are mentioned in Section 3. As import tariffs, there is no difference between a customs and a fiscal duty. Yet, in a number of countries both types of duties occur and are levied together on import trade. In those cases, both duties are added up and treated as a single import tariff.

5.1 Total Manufacturing

Let us first consider the estimates of nominal tariff protection for the whole manufacturing sector, presented in Table 1. At first glance it is evident that this form of protection differs substantially per country, whether measured as unweighted or as import-weighted tariff averages. As expected, the import-weighted tariff rates are generally lower, except in Lybia, Mauritius, Niger, Somālia, Saudi Arabia and Indonesia. At the low extreme of unweighted nominal tariff protection we find Saudi Arabia and Singapore, with average rates of 2.6 and 0.5 per cent, respectively. Pakistan, Bangladesh and India are at the high extreme, showing average rates of 73 to 80 per cent. It is remarkable to find rather high tariff averages for a number of African countries. In these countries in particular, both a customs and a fiscal duty are levied on imports.

In the light of the GSTP negotiations, the observed wide intercountry differences pose a number of serious problems, assuming that in the first instance a linear across-the-board approach to tariff cutting is adopted. First, the effectiveness of a percentage tariff cut to stimulate South-South trade in case of a high initial tariff rate may be limited. A resulting preferential rate of, say, 68 per cent after a 15 per cent tariff cut from an initial rate of 80 per cent, may still constitute an insurmountable barrier for developing countries' manufacturing industries. Second, the very existence of wide differences in initial tariff levels entails unequal or unbalanced

TABLE 1 Unweighted and Weighted Average Ad Valorem Import Tariff Rates
for the Total Manufacturing Sector in Selected Developing
Countries

Country	UAT	IWAT
1. Algeria	25.5	10.4
2. Lybia	16.1	19.2
3. Morocco	57.2	43.9
4. Sudan	52.5	33.4
5. Tunisia	29.7	28.7
6. Egypt	58.3	29.1
7. Burundi	33.5	n.a.
8. Zaire	24.7	n.a.
9. Ethiopia	34.3	31.3
10. Gambia	17.4	n.a.
11. Ghana	44.3	43.7
12. Guinea	79.2	n.a.
13. Ivory Coast	41.3	n.a.
14. Kenya	45.0	43.5
15. Liberia	28.8	27.0
16. Mauritania	58.8	n.a.
17. Mauritius	44.0	50.2
18. Niger	18.3	22.0
19. Nigeria	32.7	23.3
20. Rwanda	25.1	n.a.
21. Sierra Leone	30.2	n.a.
22. Somalia	34.9	39.4
23. Zimbabwe	11.9	n.a.
24. Togo	13.8	12.5
25. Tanzania	22.5	13.6
26. Mexico	25.4	20.9
27. Paraguay	11.6	9.5
28. Bahamas	30.2	n.a.
29. Haiti	32.1	n.a.
30. Cyprus	20.0	18.5
31. Iran	24.0	n.a.
32. Saudi Arabia	2.6	3.0
33. Syria	18.2	13.8
34. Bangladesh	80.1	51.7
35. Sri Lanka	41.2	26.0
36. India	73.0	n.a.
37. Indonesia	32.9	36.5
38. South Korea	34.4	24.6
39. Malaysia	16.8	12.3
40. Nepal	28.0	n.a.
41. Pakistan	81.1	n.a.
42. Philippines	32.3	23.4
43. Singapore	0.5	0.2
44. Thailand	33.8	23.7
45. Yugoslavia	13.0	n.a.

Note: For sources and explanation of symbols, see Appendix B

tariff concessions in absolute terms: high-level tariff countries provide higher preference margins than low-tariff countries. Moreover, the tariff concessions of a low tariff country may be too marginal to be effective as a trade preference. In the preparatory phase of the GSTP negotiations, these problems received due attention. But a linear percentage reduction was preferred to various balancing procedures, like tariff margins in percentage points, non-uniform tariff reductions and tariff harmonization formulae. The problem of unequal concessions will therefore continue to play a role in the negotiations.

It is difficult to see how such high tariff levels should be understood: predominantly as an instrument for maximizing government revenues or as protection for domestic producers. High tariff rates can only be effective in revenue maximalization in case no close substitutes are available and demand is inelastic. As the manufacturing sectors in the large Asian countries are generally more developed and diversified than in the smaller African countries, it is more logical to view the high tariffs in Asia predominantly as pure protection, whereas the African countries use high tariff in the first instance as a revenue-maximizing instrument. This impression is supported by the finding that in quite a number of African countries the weighted tariff averages are close to or even exceeding the unweighted tariff averages, e.g. Libya, Tunisia, Ethiopia, Ghana, Kenya, Liberia, Mauritius, Niger, Somalia and Togo. A better insight into this matter can be obtained when the tariff protection for different product groups is examined in the next section.

This leads us to the first set of regression analyses to investigate the extent to which the variation in nominal tariff protection between countries can be attributed to country specific differences in level of economic development, domestic market size and preferred trade level. The results, summarized in Table 2, confirm that it is the country at a lower level of economic development, with a larger domestic market size and a lower preferred trade level that has the most highly protected manufacturing sectors. Among these three variables, the impact of the variable GNP per capita is clearly the most significant. The positive coefficient for the variable POP leaves little doubt about the prevailing effect of this variable on the tariff

TABLE 2 Determinants of the Level of Nominal Protection for the Manufacturing Sector in Developing Countries (t-statistics in parentheses)

Dependent variable	Constant	$\ln$ GNP p/c	$\ln$ POP.	$\frac{\ln E_m}{VA_m}$	n	R ²	F
UAT	75.37 (4.61)	-7.62 (-3.35)	3.32 (2.09)		45	.33	10.14
UAT	55.76 (5.95)			-6.06 (-2.48)	45	.12	6.13
UAT	80.82 (4.79)	-6.78 (-2.86)	3.00 (1.87)	-2.78 (-1.19)	45	.35	7.30

Note: For sources and explanation of symbols, see Appendix B

height in developing countries: the reasoning is supported that high tariff rates can be better afforded in larger than in smaller developing countries, notwithstanding the tariff-reducing impact of a large domestic market size in consequence of scale economies and relatively high transport costs. Clearly, vested interests flourish better in larger than in smaller countries. The regression results with import-weighted average tariffs as the dependent variable are not reproduced here; the established relationships still hold, although the variables perform somewhat more poorly.

The proportion of the variance of average tariff rates that could be explained is rather low. Expectations about the levels of explanation, however, have to be modest if it is taken into account that protection is measured by nominal tariffs alone, whereas, on the explaining side, due to data deficiencies, only three determinants of protection in developing countries could be included.

5.2 Five-Sector Classification

The five-sector classification of manufacturing production has been established on the basis of the nature and final use of the products in order to obtain a grouping of activities to which an economic meaning can be attached. Thus, consumer goods, intermediates (sector IV) and capital goods (sector V) are distinguished, with a further subdivision of consumer goods into nondurable consumer goods

(sector I), beverages and tobacco (sector II), and durable consumer goods (sector III).

Apart from variation in the level of protection among countries, the structure of protection in developing countries shows a pattern of progression according to the level of fabrication. Final, mainly nondurable consumer goods enjoy the highest protection, intermediates, machinery and other producer goods the lowest. Many country studies reveal this specific structure of protection in developing countries (Balassa, 1971; Krueger, et al., 1981). It is especially tuned in to the first or easy phase of import substitution. If a country, however, is gradually embarking on the second phase of import substitution, the structure of protection has to change accordingly. It is then to be expected that industries producing more sophisticated products, using more capital-intensive production processes with longer production runs, will be favoured. This means providing relatively higher levels of protection to durable consumer goods, intermediates and capital goods. The structure of protection will then become more even.

Table 3 summarizes the estimates of nominal tariff protection for the five-sector classification in our sample of countries. Per major manufacturing product group, the first column shows unweighted tariff averages, whereas the second column gives import-weighted tariff averages.

As to the observed differences between unweighted and import-weighted tariff levels, it is of interest to note that unweighted tariff averages generally exceed weighted tariff averages in nondurable consumer goods, whereas the opposite holds for durable consumer goods and capital goods. It illustrates the high dependence on imports of durables and capital goods in many developing countries. This applies in particular to those countries in Table 1 which show high weighted tariff averages compared to their unweighted average tariff rate.

The difference in tariff protection between the major manufacturing sectors is analyzed in two stages. First, separate regression analyses are run for each of the five major sectors with GNP per capita, population size and trade level as explanatory variables. This amounts to assuming a different relationship per sector. Second,

TABLE 3 Average Ad Valorem Import Tariff Rates for Major Manufacturing Product Group in Selected Developing Countries

Sector		I		II		III		IV		V	
Country		UAT	IWAT	UAT	IWAT	UAT	IWAT	UAT	IWAT	UAT	IWAT
1. Algeria		51.7	21.3	83.5	26.0	38.9	27.0	16.3	9.3	6.6	6.0
2. Lybia		26.1	23.3	50.0	1.3	24.9	32.1	11.1	15.3	11.2	12.8
3. Morocco		98.2	94.2	164.5	198.1	81.9	66.9	45.5	40.3	34.7	37.2
4. Sudan		80.3	64.8	558.5	60.9	90.6	114.0	38.6	20.9	31.8	27.4
5. Tunisia		52.5	30.6	74.0	23.9	61.1	95.1	21.8	18.4	16.5	20.2
6. Egypt		92.2	55.5	1501.3	113.6	93.5	108.3	35.3	27.5	18.2	25.8
7. Burundi		58.7	n.a.	115.5	n.a.	58.9	n.a.	25.1	n.a.	25.2	n.a.
8. Zaire		38.0	n.a.	108.9	n.a.	48.2	n.a.	22.6	n.a.	14.0	n.a.
9. Ethiopia		52.7	42.5	55.0	33.7	32.0	51.4	32.8	18.2	16.9	36.3
10. Gambia		24.5	n.a.	-	-	30.0	n.a.	15.6	n.a.	13.4	n.a.
11. Ghana		56.5	51.6	110.0	114.6	72.6	73.4	39.6	34.5	34.7	30.8
12. Guinea		121.3	n.a.	176.6	n.a.	114.6	n.a.	65.4	n.a.	59.1	n.a.
13. Ivory Coast		53.3	n.a.	59.6	n.a.	50.8	n.a.	41.3	n.a.	28.3	n.a.
14. Kenya		63.7	53.7	99.3	104.0	59.8	99.0	41.6	32.5	29.1	30.7
15. Liberia		42.3	31.8	53.2	60.8	39.2	29.5	21.7	28.3	19.6	18.1
16. Mauritania		77.9	n.a.	102.9	n.a.	70.0	n.a.	56.0	n.a.	43.0	n.a.
17. Mauritius		64.7	19.8	184.8	232.7	100.8	159.4	26.0	34.8	45.2	75.5
18. Niger		25.8	17.4	33.0	41.5	21.9	31.5	17.3	22.6	12.0	20.8
19. Nigeria		48.1	42.0	102.6	0.0	48.4	37.0	30.7	25.2	20.5	18.4
20. Rwanda		44.8	n.a.	96.3	n.a.	35.3	n.a.	21.1	n.a.	13.1	n.a.
21. Sierra Leone		42.8	n.a.	51.1	n.a.	42.5	n.a.	24.8	n.a.	19.4	n.a.
22. Somalia		50.3	45.5	189.0	289.5	44.2	62.2	28.7	26.0	17.4	9.2
23. Zimbabwe		22.1	n.a.	28.0	n.a.	21.2	n.a.	9.5	n.a.	6.9	n.a.
24. Togo		18.0	16.6	19.6	28.2	19.0	11.1	15.9	13.0	6.5	6.7
25. Tanzania		32.2	33.7	87.5	98.5	18.1	27.4	21.3	9.7	14.4	15.2
26. Mexico		54.5	50.5	53.1	53.9	60.6	62.5	21.8	17.9	17.8	20.9
27. Paraguay		14.6	16.1	13.8	12.1	12.1	13.4	11.8	9.9	6.6	5.6
28. Bahamas		27.0	n.a.	44.6	n.a.	37.0	n.a.	30.8	n.a.	31.4	n.a.
29. Haiti		41.2	n.a.	46.5	n.a.	38.7	n.a.	33.6	n.a.	15.3	n.a.
30. Cyprus		41.9	37.0	31.5	23.7	29.2	36.6	11.8	11.5	12.4	17.0
31. Iran		42.6	n.a.	70.3	n.a.	25.2	n.a.	19.6	n.a.	12.3	n.a.
32. Saudi Arabia		3.8	3.8	2.8	3.9	3.5	3.0	2.4	2.7	1.2	2.4
33. Syria		29.5	20.2	101.9	97.2	31.1	19.6	12.2	11.4	13.5	14.7
34. Bangladesh		120.6	54.0	159.7	310.6	93.0	76.9	69.2	45.2	56.3	54.8
35. Sri Lanka		74.7	45.9	271.4	313.3	59.5	39.9	32.4	25.3	20.5	20.6
36. India		92.6	n.a.	168.1	n.a.	76.9	n.a.	71.2	n.a.	57.7	n.a.
37. Indonesia		52.2	45.1	55.2	58.1	52.7	76.0	28.0	20.5	22.7	40.7
38. South Korea		52.7	39.0	132.8	149.9	60.9	48.7	30.9	27.7	20.6	18.0
39. Malaysia		22.4	18.9	43.9	46.5	32.4	32.7	14.8	9.3	9.7	12.7
40. Nepal		48.3	n.a.	153.5	n.a.	76.0	n.a.	18.3	n.a.	14.4	n.a.
41. Pakistan		115.0	n.a.	176.9	n.a.	126.6	n.a.	80.1	n.a.	45.7	n.a.
42. Philippines		52.1	30.5	48.6	50.0	46.8	33.0	28.6	22.6	20.3	22.4
43. Singapore		1.3	0.7	0.0	0.0	1.7	0.0	0.1	0.3	0.2	0.0
44. Thailand		60.1	35.8	55.4	54.4	49.7	75.2	27.9	19.8	17.8	20.5
45. Yugoslavia		16.1	n.a.	21.1	n.a.	17.4	n.a.	11.5	n.a.	13.8	n.a.

Note: For sources and explanation of symbols, see Appendix B

it is postulated that the three explanatory variables have the same effect on the tariff height per sector and that sector characteristics are responsible for different tariff levels. In other words, the regression coefficients are assumed to be the same, whereas the sector differences show up in the intercept and the dummy variables. A dummy variable is assigned to four out of the five product groups. The results are summarized in Tables 4 and 5. Here too, regression were run with both unweighted and import-weighted tariff averages as dependent variables. Only the results for the unweighted tariff averages are presented, as the results for the import-weighted tariff averages do not provide new insights, apart from being generally poorer.

From Table 4, it can be observed that the explanatory variables have generally the same effect on the average tariff level in the various sectors: apart from some variation in the value of the coefficients, they all bear consistently the expected sign in each sector regression. By contrast, major differences are observed for the values of the intercepts, about which more will be said below. The regression for sector I shows the best results: all above-elaborated determinants of protection in developing countries are the most relevant for nondurable consumer goods of the easy phase of import substitution. In particular, the variable for domestic market size performs well. This finding is the more striking as nondurables are generally not subject to important economies of scale. This would imply an insignificant relationship and in any case not a strong positive one. An obvious explanation suggests that vested interests flourish better in larger than in smaller countries.

The results for sector II are poor by any standard. This is not surprising as beverages and tobacco are two of those typical luxury goods which, apart from balance-of-payments or revenue considerations, are quite often heavily taxed for ideological and religious reasons. Consequently, the average tariff rate for beverages and tobaccos show an extreme variation across countries, ranging from zero in Singapore and Gambia to over 1,500 per cent in Egypt, 550 per cent in Sudan and between 150 and 200 per cent in Morocco, Guinea, Mauritius, Somalia, Bangladesh, India and Pakistan. Moreover, the zero and very low tariff rates do not necessarily mean that imports of beverages and tobacco are

TABLE 4 Determinants of the Level of Nominal Protection per Major Manufacturing Sector Developing Countries (t-statistics in parentheses)

Dependent variables	Constant	$\ln$ GNPp/c	$\ln$ Pop.	$\ln \frac{E_m}{VA_m}$	n	R ²	F
UAT SECTOR I	92.60 (3.67)	-8.97 (-2.60)	5.19 (2.23)	-5.03 (-1.49)	45	.37	8.04
UAT SECTOR II	173.67 (.71)	-19.00 (-.57)	23.76 (1.05)	-23.18 (.71)	45	.07	1.08
UAT SECTOR III	96.79 (3.50)	-8.94 (-2.37)	3.72 (1.46)	-2.82 (-.76)	45	.25	4.51
UAT SECTOR IV	61.19 (3.90)	-6.40 (-2.99)	3.02 (2.08)	-2.00 (-.95)	45	.36	7.70
UAT SECTOR V	43.36 (3.07)	-4.04 (-2.09)	.97 (.74)	-2.29 (-1.21)	45	.21	3.59

Note: For sources and explanations of symbols, see Appendix B

free. On the contrary, as will be shown in next section, beverages and tobacco are quite often subject to specific tariff rates and QRs. It should, moreover, be noted that our estimates do not include the often occurring special taxes on beverages and tobacco under heading 11.2 of the TIS inventory, as these taxes are interpreted as not strictly trade restraining.

The regression for sectors III, IV and V show rather similar results. The variable GNP per capita is statistically significant and bears the expected sign, whereas, compared to the results for sector I, the levels of significance for the variables POP and E_m/VA_m are substantially lower. Only for intermediates it can be maintained, as indicated by the positive and significant effect of the variable POP, that in larger countries serious efforts are undertaken to move to second-stage import substitution by providing tariff protection to domestic production of intermediates. There are probably still too few countries that started replacement of imports of capital goods to conclude the same for this type of second-stage import-substitution goods.

The difference between the tariff levels per sector are clearly revealed by the regression results represented in Table 5. Note that

TABLE 5 Determinants of the Level of Nominal Protection for Major Manufacturing Sector Developing Countries (t-statistics in parentheses)

Dependent variable	Constant	D ₃	D ₄	D ₅	$\ln GNP$	p/c	$\ln POP$	$\ln \frac{E_m}{VA_m}$	n	R ²	F
UAT											
excl.	86.85	-1.17	-22.65	-29.64	-7.09	3.22	-3.04		180	.45	23.54
Sector II	(7.88)	(-.28)	(-5.37)	(-7.02)	(-4.85)	(3.26)	(-2.11)				

Note: For sources and explanation of symbols, see Appendix B

sector II has been excluded because of its peculiar characteristics discussed above. By postulating a common set of slope coefficients over the four remaining sectors, the differential sector effect is revealed by the coefficient for the relevant dummy variable as compared to the intercept value, which represents the effect for the sector to which no dummy variable has been assigned. Thus, the regression in Table 5 implies that, given the level of economic development, domestic market size and preferred trade level, the average tariff levels for sectors I and III do not deviate significantly from one another. There is also no significant difference between the average tariff levels for sectors IV and V. By contrast, the average tariff levels for sectors IV and V indeed appear to be significantly lower than those for sectors I and III. On average, tariffs for sector IV are a quarter, and for sector V a third, lower than those for sectors I and III. Moreover, the results in Table 5 show that the overall level of explanation as well as the significance of the three explaining variables improve if due account is taken of a differential sector effect as compared to an average for total manufacturing.

In sum, the structure of nominal protection in developing countries is clearly characterized by a bipartition between consumer and producer goods. The analysis also suggests that, although domestic production in many developing countries has advanced now to sectors III and IV, this progress as yet did not lead to a general tariff reduction for sector I goods. Furthermore, the existing structure of nominal production provides the least incentive for capital goods industries. In fact, in terms of effective protection, this incentive is completely absent or even negative in many a developing country. The result of

such a protection structure is that, on the one hand, the import of capital goods is encouraged, while on the other hand there is little or no incentive for the domestic production of such goods (Nugent, 1985, p.111). Consequently, the dependence on the North as supplier of capital goods is perpetuated by the developing countries' own protection policy.

6. Specific Tariffs and Quantitative Restrictions

In this section, a descriptive analysis is provided of specific tariffs and QRs restraining import trade. Our interest lies in ascertaining, first, the amount of trade subject to specific tariffs and QRs and second, whether any apparent structure to the incidence of specific tariffs and QRs can be discerned from the available data, and to what extent this structure, if any, corresponds to or deviates from the specific structure of tariff protection in developing countries. Due to data deficiencies, the sample of countries for which QRs could be examined is reduced to 18.

6.1 Frequency and Coverage of Specific Tariffs

Tables 6 and 7 contain the frequency and coverage indices of specific tariff rates for total manufacturing import trade and for the five-sector subdivision, respectively. Examining these tables provides us with the following information.

Specific tariffs are a widely used instrument of trade policy. Out of the 45 countries contained in the sample, 39 recorded their application. Apart from six exceptions, however, the frequency of specific tariff rates is low, generally not exceeding a few per cent, sometimes only a few tenths of a percentage point. The exceptions refer to Ethiopia, Indonesia, Malaysia, Pakistan and Thailand where the frequency index ranges between 5 and 10 per cent, and above all Haiti with a frequency index of 27.4 per cent.

It appears that the coverage index exceeds the frequency index in all cases, except Indonesia. In a few cases, this difference is substantial. The highest value of the coverage index is recorded for

Niger, where 27.0 per cent of manufacturing import trade is affected by specific tariffs. High values of the coverage index are recorded also for Ethiopia, Syria, Malaysia and Thailand, i.e. 22.0, 23.4, 23.1 and 19.2 per cent, respectively. This suggests that the application of specific tariffs is an effective device to collect government revenues. For Indonesia, protectionist reasons seem to prevail in applying specific tariffs.

Specific tariffs are unequally distributed among the various product groups. As can be seen from the five-sector division in Table 7, they are most frequently applied to imports of beverages and tobacco, followed by nondurable consumer goods and intermediates. Durable consumer goods and capital goods are rarely affected by specific tariffs.

A closer examination of the incidence of specific tariffs at the product level reveals some interesting features. It appears that both beverages and tobacco are heavily subjected to specific tariffs in the majority of countries, although there seems to be a higher preference to impose specific tariffs on tobacco. Not uncommon is a coverage index of 100 or close to 100 per cent. Generally, the incidence of specific tariff rates on nondurable consumer goods is rather low, except for some food products which pushes up the average, in a number of countries the coverage index in particular. This is almost exclusively due to one product, namely refined sugar. Among the intermediates, textiles, industrial chemicals, other chemical products, and petroleum distillates and manufactures emerge as the product groups where specific tariffs frequently occur. In many countries, the coverage index for imports of petroleum distillates is particularly high. A specific tariff is most frequently imposed on motor spirit, aviation spirit and gas oils. The textiles that are subjected in a number of countries usually include cotton yarn and fabrics, and synthetic fibres.

In fact, only four specific products are severely affected, namely refined sugar, beverages, tobacco and various light petroleum oils. The preference for these four products can be attributed to a number of characteristics they have in common. First, trade in these goods can easily be expressed in quantity terms as they are fairly homogeneous

TABLE 6 Frequency and Coverage Indices of Specific Tariffs for the Total Manufacturing Sector in Selected Developing Countries

Country	FI	CI
1. Algeria	-	-
2. Libya	-	-
3. Morocco	0.2	0.6
4. Sudan	1.0	7.2
5. Tunisia	0.2	0.4
6. Egypt	0.2	0.7
7. Burundi	1.4	n.a.
8. Zaire	0.9	n.a.
9. Ethiopia	9.9	22.0
10. Gambia	3.3	n.a.
11. Ghana	2.7	4.1
12. Guinea	0.5	n.a.
13. Ivory Coast	1.1	n.a.
14. Kenya	1.9	5.6
15. Liberia	2.2	8.4
16. Mauritania	-	-
17. Mauritius	0.4	1.1
18. Niger	0.9	27.0
19. Nigeria	2.9	5.1
20. Rwanda	0.9	n.a.
21. Sierra Leone	1.7	n.a.
22. Somalia	0.9	2.7
23. Zimbabwe	4.3	n.a.
24. Togo	1.1	14.2
25. Tanzania	0.7	3.4
26. Mexico	-	-
27. Paraguay	-	-
28. Bahamas	3.4	n.a.
29. Haiti	27.4	n.a.
30. Cyprus	2.6	5.6
31. Iran	3.0	n.a.
32. Saudi Arabia	0.4	0.9
33. Syria	4.0	23.4
34. Bangladesh	1.6	14.3
35. Sri Lanka	1.4	18.5
36. India	1.8	n.a.
37. Indonesia	8.7	1.4
38. South Korea	0.1	4.9
39. Malaysia	9.8	23.1
40. Nepal	5.8	n.a.
41. Pakistan	7.3	n.a.
42. Philippines	1.3	9.2
43. Singapore	3.2	9.0
44. Thailand	5.0	19.2
45. Yugoslavia	-	-

Note: For sources and explanation of symbols, see Appendix B

TABLE 7 Frequency and Coverage Indices of Specific Tariffs for Major Manufacturing Sector in Selected Developing Countries.

Country	Sector	I		II		III		IV		V	
		FI	CI	FI	CI	FI	CI	FI	CI	FI	CI
1.	Algeria	-	-	-	-	-	-	-	-	-	-
2.	Libya	-	-	-	-	-	-	-	-	-	-
3.	Morocco	-	-	17.9	87.9	-	-	-	-	-	-
4.	Sudan	0.4	0.4	47.4	98.5	-	-	0.9	14.3	-	-
5.	Tunisia	0.4	0.0	12.5	92.0	-	-	-	-	-	-
6.	Egypt	-	-	27.3	94.6	-	-	-	-	-	-
7.	Burundi	-	-	70.3	n.a.	-	-	0.7	n.a.	-	-
8.	Zaire	-	-	66.7	n.a.	-	-	0.6	n.a.	-	-
9.	Ethiopia	2.5	29.5	79.3	86.4	1.4	0.0	16.3	35.7	0.7	0.0
10.	Gambia	1.7	n.a.	100.0	n.a.	-	-	3.2	n.a.	-	-
11.	Ghana	0.9	5.6	78.6	91.3	-	-	2.4	5.9	-	-
12.	Guinea	0.3	n.a.	-	-	-	-	0.9	n.a.	-	-
13.	Ivory Coast	0.3	n.a.	14.9	n.a.	-	-	1.5	n.a.	-	-
14.	Kenya	0.6	1.2	51.6	65.5	-	-	2.0	11.1	-	-
15.	Liberia	0.5	7.6	57.8	60.3	-	-	2.1	17.5	-	-
16.	Mauritania	-	-	-	-	-	-	-	-	-	-
17.	Mauritius	-	-	-	-	-	-	0.8	1.8	-	-
18.	Niger	0.1	1.1	25.4	65.6	-	-	0.6	45.9	-	-
19.	Nigeria	3.8	23.6	68.2	100.0	-	-	2.8	4.8	-	-
20.	Rwanda	-	-	61.9	n.a.	-	-	0.4	n.a.	-	-
21.	Sierra Leone	0.5	n.a.	51.1	n.a.	-	-	1.2	n.a.	-	-
22.	Somalia	0.7	7.7	-	-	-	-	1.5	3.1	-	-
23.	Zimbabwe	2.0	n.a.	82.1	n.a.	-	-	5.0	n.a.	-	-
24.	Togo	0.3	22.4	58.8	97.7	-	-	0.6	5.4	-	-
25.	Tanzania	0.6	18.6	27.3	89.7	-	-	0.6	4.5	-	-
26.	Mexico	-	-	-	-	-	-	-	-	-	-
27.	Paraguay	-	-	-	-	-	-	-	-	-	-
28.	Bahamas	2.4	n.a.	45.8	n.a.	20.8	n.a.	2.7	n.a.	1.1	n.a.
29.	Haiti	16.4	n.a.	5.2	n.a.	2.0	n.a.	42.2	n.a.	4.5	n.a.
30.	Cyprus	2.1	10.4	77.8	99.7	-	-	2.7	5.8	-	-
31.	Iran	-	-	-	-	-	-	6.1	n.a.	-	-
32.	Saudi Arabia	-	-	37.0	62.1	-	-	0.2	0.0	-	-
33.	Syria	2.2	41.4	25.0	81.9	5.1	23.4	5.3	23.6	1.9	16.1
34.	Bangladesh	-	-	33.3	10.6	-	-	2.0	25.0	0.5	0.0
35.	Sri Lanka	2.0	79.1	66.7	79.5	2.0	3.3	0.3	3.8	0.3	0.2
36.	India	0.3	n.a.	11.1	n.a.	-	-	2.6	n.a.	-	-
37.	Indonesia	27.3	6.2	34.0	17.1	2.2	1.2	1.8	2.0	-	-
38.	South Korea	0.6	59.1	-	-	-	-	-	-	-	-
39.	Malaysia	8.7	48.8	27.3	41.1	9.7	1.9	12.9	45.8	2.4	0.5
40.	Nepal	1.6	n.a.	5.0	n.a.	-	-	10.4	n.a.	-	-
41.	Pakistan	1.3	n.a.	60.0	n.a.	4.3	n.a.	11.4	n.a.	0.5	n.a.
42.	Philippines	0.2	0.6	26.3	64.1	-	-	1.9	17.8	-	-
43.	Singapore	1.3	2.8	86.0	52.9	5.4	1.0	2.1	20.9	-	-
44.	Thailand	2.9	30.8	7.1	0.1	-	-	7.8	31.4	0.3	0.9
45.	Yugoslavia	-	-	-	-	-	-	-	-	-	-

Note: For sources and explanation of symbols, see Appendix B

products, a precondition for applying specific rates. Second, they can be conceived as luxury goods. Third, imports of these products often do not compete with domestic substitutes and/or demand is rather inelastic. For these very reasons, the imposition of specific tariff rates on exactly these four products can serve the purpose of collecting government revenues.

There are, of course, also protectionist grounds involved in the application of specific tariffs. In quite a number of countries, various textile products are subjected to specific tariffs and this is a clear instance of protection. In Indonesia, Malaysia and to a lesser extent Ethiopia, a broad range of consumer goods and intermediates is affected by specific tariffs, like various food products, textiles, clothing (Indonesia), footwear (Indonesia), rubber products, plastic products, iron and steel, cement and lamps. By these specific tariffs, no doubt, domestic industry is provided protection. In general, however, the application of a specific tariff as a protectionist device does not seem to be very effective.

6.2 The Incidence of Three Groups of Quantitative Restrictions

Table 8 summarizes the frequency and coverage indices of QRs on total manufacturing import trade in 18 developing countries broken down in three groups of measures: restrictive licensing procedures, various types of quotas and import prohibitions for whatever reason; see Section 3. However, the identification of types of restrictions is sometimes ambiguous. Not infrequently, one tariff line is subjected to more than one type of restriction. For instance, different types of import licences are required, or an import licence is required while in addition an import quota is in force. In calculating the frequency and coverage indices, instances of two or more QRs applied to one tariff line are classified by the a priori least restrictive restriction. Moreover, the application of a restriction is sometimes partial. In a number of countries, this is especially the case with a total import prohibition, while the grounds for exceptional treatment are not specified. The indices in Table 8 include all QRs, whether partial or not.

QRs apply on average to 19.2 per cent (weighted average equals 17.1 per cent) of the tariff lines in the sample countries, while the trade coverage of these restrictions amounts on average to 26.5 per

TABLE 8 Frequency and Coverage Indices of Three Types of Quantitative Restrictions for Total Manufacturing Import Trade in Selected Developing Countries

Country	All Quantitative Restrictions		Licensing		Quotas		Prohibitions	
	FI	CI	FI	CI	FI	CI	FI	CI
1. Libya	0.7	0.0	-	-	-	-	0.7	0.0
2. Ghana	69.4	56.5	50.9	54.0	-	-	18.5	2.5
3. Kenya	25.1	19.9	-	-	25.1	19.9	-	-
4. Liberia	4.0	8.1	3.4	5.6	-	-	0.6	2.5
5. Nigeria	56.5	53.7	44.3	52.1	-	-	12.2	1.6
6. Togo	2.9	10.1	2.9	10.1	-	-	-	-
7. Mexico	6.5	20.1	6.4	19.8	-	-	0.1	0.3
8. Cyprus	26.7	47.2	26.7	47.2	-	-	-	-
9. Saudi Arabia	9.7	1.5	9.1	1.4	-	-	0.6	0.1
10. Bangladesh	25.6	45.9	22.6	34.4	0.2	0.5	2.8	11.0
11. Sri Lanka	19.5	49.3	19.5	49.3	-	-	-	-
12. Indonesia	10.1	32.8	9.7	31.2	0.1	1.5	0.3	0.1
13. South Korea	23.0	47.9	23.0	47.9	-	-	-	-
14. Malaysia	3.0	6.1	2.7	6.0	-	-	0.3	0.1
15. Pakistan	36.7	34.8	36.5	34.8	0.2	0.0	-	-
16. Philippines	13.5	27.9	-	-	13.2	27.7	0.3	0.2
17. Singapore	4.8	3.1	4.6	3.1	-	-	0.2	0.0
18. Thailand	7.7	11.8	4.3	7.0	-	-	3.4	4.8
Unweighted mean	19.2	26.5	14.8	22.4	2.2	2.8	2.2	1.3
Weighted mean	17.1	16.3	15.1	14.8	0.5	1.0	1.5	0.5

Note: For sources and explanation of symbols, see Appendix B

cent (weighted average equals 16.3 per cent). The most widely used measures are licensing procedures. They are employed in 15 out of the 18 sample countries and affect on average 14.8 per cent (weighted average equals 15.1 per cent) of the tariff lines and 22.4 per cent (weighted average equals 14.8 per cent) of manufactured imports. Next in incidence are import prohibitions, affecting on average 2.2 per cent (weighted average equals 1.5 per cent) of the tariff lines. That an import prohibition is not always absolute appears from the fact the still 1.3 per cent (weighted average equals 0.5 per cent) of the sample countries' manufactured imports are accounted for by "prohibited"

imports. It is surprising to find that quota systems to restrain imports are far from popular in the sample countries. In fact, only Kenya and the Philippines make extensive use of import quotas.

These averages, however, conceal a great variation per country in the frequency and trade coverage of QRs. The highest values of both the frequency index and the coverage index are recorded for Ghana, i.e. 69.4 and 56.5 per cent, respectively, the lowest values for Libya, i.e. 0.7 and 0.0 per cent respectively. In countries like Ghana, Kenya and Saudi Arabia, the frequency index of total QRs is higher than the corresponding coverage index. The opposite, a substantially higher value for the coverage than for the frequency index, holds for countries like Cyprus, Sri Lanka, South Korea and the Philippines. The impression is gained that, apart from intercountry variation in the frequency of application, there have to be marked differences per country in the nature, intention and effectiveness of types of QRs. This becomes clear from the following examples.

Imports of some meat products and beverages are strictly prohibited in Libya. There are no escape-clauses, nor is there an import tariff applicable, and consequently, the coverage index equals nil. In Liberia, by contrast, imports of sugar preparations face a formal import ban. Yet, import duties ranging from 15 to 96 per cent are levied on imports of various preparations and in fact 2.5 per cent of Liberia's manufactured imports is made up of sugar preparations. Bangladesh and Thailand apply both total and partial import prohibitions for a wide range of products, which at the same time face import tariffs. For both categories of import prohibitions, imports are registered, accounting for 11.0 and 4.8 per cent of total manufactured imports in Bangladesh and Thailand, respectively. This is of course not to say that the prohibition measures in these countries have no trade-restraining effect. They certainly have, be it as result of the mere uncertainty of their implementation.

More or less the same goes for the various restrictive licensing procedures. In the most frequently used procedures, the import licence is granted simply if administrative requirements are met or on a case-by-case basis; see Section 3. These procedures are widely in use in, e.g., South Korea. They primarily function as a monitoring system of

the imports of specific products and the case-by-case permission becomes binding when the need is felt to regulate these imports. These licensing procedures as such can thus be discretionary and liberal, as is evident from the 47.9 per cent share of manufactured imports that is covered by a licence requirement in South Korea. Licensing procedures in Cyprus, Sri Lanka, Bangladesh and Indonesia also do not seem to constitute insurmountable barriers to imports. This is clearly not the case in Saudi Arabia, where over 9.1 per cent of the tariff lines record the requirement of an import licence which formally is granted if administrative procedures are met. Apparently, these procedures are so cumbersome and hence so restrictive that the coverage index equals only 1.4 per cent. The uncertainty concerning the trade-restraining impact is particularly significant for the "exceptional licence" procedure for goods that are normally prohibited. Among the countries contained in the sample, Nigeria and Pakistan use this "exceptional licence" procedure most extensively, showing frequency indices of 44.3 and 36.5 per cent, respectively. However, the high values of the corresponding coverage indices of 52.1 and 34.8 per cent, respectively, illustrate that this licensing procedure is not very exceptional.

It can be inferred from the foregoing observations that the intention behind and consequent application of a QR exercises a decisive impact on its trade-restraining effect, not the specific form or type of a QR. Hence, in reflecting on a structure to the incidence of QRs in the next section, no further account is taken of the different types of QRs.

6.3 Structure to the Incidence of Quantitative Restrictions.

According to the data presented in Table 9, QRs occur in each of the five distinguished major sectors in almost all sample countries. In absolute numbers, about two-third of the QRs applied by the sample countries are directed against the imports of intermediates and capital goods, about one-third is directed against consumer goods, mainly nondurables. In relative terms, however, the incidence structure is less distinct. Indeed, both the weighted and unweighted averages of the frequency index per product group suggest a structure to the incidence

of QRs similar to the specific structure of tariff protection in developing countries. Thus, the greatest relative frequencies are found, in descending order, for beverages and tobacco, durable consumer goods and nondurable consumer goods, at some distance followed by capital goods and intermediates. Compared to the structure of tariff protection, only intermediates and capital goods interchanged their position. Measured by relative frequencies, clearly the fewest QRs are imposed against imports of intermediates.

These averages, however, mask sharp intercountry differences. The data in Table 9 indicate that in 11 countries a structure to the incidence of QRs is found similar to the above-treated average structure. In the remaining 7 countries, on the contrary, QRs occur either with a more or less uniform frequency across sectors or with the greatest relative frequency against imports of intermediates and/or capital goods. Such an a-specific structure, where imports of capital goods in particular are affected most severely by QRs, is found in countries like Bangladesh and Sri Lanka. The frequency index of QRs applied in these countries on imports of capital goods equals 53.8 and 43.2 per cent, respectively. High values of these indices for capital goods are recorded also in Ghana, Nigeria and South Korea, namely 60.6, 61.0 and 38.4 per cent, respectively.

With the above-made reservation on the ambiguous nature of the information of coverage indices in mind, yet these indices, also presented in Table 9, give rise to the following observations. First, the unweighted averages of the coverage indices per sector show the same structure as that revealed by the frequency measures. The trade coverages per sector according to the corresponding weighted average values show a somewhat deviating structure. This, however, is solely caused by the very large weight of Libya's imports of nondurable consumer goods in the total of the sample countries, namely almost two-thirds, whereas Libya's coverage index for this sector equals zero. If Libya, in turn, is disregarded, the weighted average coverage indices per sector show a pattern more in line with the structure revealed by the frequency indices, although the difference per sector varies very little.

TABLE 9 Frequency and Coverage Indices of Total Quantitative Restrictions for Major Manufacturing Sectors in Selected Developing Countries

Sector	I		II		III		IV		V	
Country	FI	CI	FI	CI	FI	CI	FI	CI	FI	CI
1. Libya	0.8	0.0	72.7	0.0	-	-	0.1	0.0	-	-
2. Ghana	84.8	84.5	85.7	83.4	91.3	99.3	63.2	43.0	60.6	66.8
3. Kenya	57.9	19.0	12.9	5.6	31.9	80.7	17.4	14.7	8.5	18.7
4. Liberia	6.1	22.9	-	-	-	-	3.8	11.3	1.5	1.0
5. Nigeria	70.8	52.6	100.0	100.0	80.0	88.3	45.7	41.8	61.0	60.1
6. Togo	1.4	7.1	-	-	10.9	80.9	2.6	5.7	4.2	9.2
7. Mexico	32.4	41.8	72.4	99.7	35.2	79.2	2.1	5.4	1.2	25.7
8. Cyprus	37.2	38.5	61.1	52.0	15.2	70.9	20.0	41.4	31.9	55.8
9. Saudi Arabia	2.6	0.8	-	-	1.7	0.0	15.7	1.3	5.7	2.3
10. Bangladesh	18.8	85.9	3.7	5.8	40.3	91.4	18.9	33.4	53.8	57.9
11. Sri Lanka	4.3	79.7	-	-	16.3	51.3	17.8	30.7	43.2	53.6
12. Indonesia	2.7	11.9	-	-	14.3	47.5	12.6	19.7	14.0	50.1
13. South Korea	37.0	85.3	64.8	99.2	60.0	66.4	8.3	36.6	38.4	51.2
14. Malaysia	3.4	28.2	22.7	82.0	11.8	0.0	1.6	6.9	3.0	0.0
15. Pakistan	67.2	47.9	95.0	100.0	57.4	47.3	27.2	16.8	28.6	73.1
16. Philippines	2.2	1.2	42.9	82.9	29.3	100.0	15.8	32.1	16.4	22.3
17. Singapore	5.3	9.3	20.9	30.1	19.6	1.1	3.5	3.6	3.4	0.9
18. Thailand	9.1	32.6	21.4	78.9	8.6	47.9	7.2	5.9	7.1	14.7
Unweighted means	24.7	36.1	37.6	45.5	29.1	52.9	15.8	19.5	21.3	31.3
Weighted means (exclusive of Libya)	22.6	8.0 (23.3)	32.7	25.4 (26.4)	28.9	22.9 (24.8)	13.2	14.9 (15.5)	18.2	22.6 (23.7)

Note: For sources and explanation of symbols, see Appendix B

Second, a comparison of frequency and coverage indices per sector reveals that the coverage index takes both substantially lower and substantially higher values than the frequency index. This again indicates the difference in purpose of the measures employed. While for some product groups the main aim seems to be protection of domestic industry, for other product groups balance-of-payments considerations are likely to be paramount. The protection aim seems to be most relevant for nondurable consumer goods, whereas QRs directed against imports of durable consumer goods, intermediates and capital goods also, and sometimes mainly, serve the purpose of monitoring the

balance-of-payments position. From this and from the relatively high share of capital goods' imports covered by QRs, it can be inferred that, although all QRs are uncertain in their implementation, this seems to be especially true of QRs on capital goods. Even those restrictions on capital goods which have in the first instance primarily a monitoring function, can become clearly regulating and restrictive in time of balance-of-payments problems. The administrative procedures already exist, and only have to be tightened if the need is felt.

7. Implications for the GSTP

Of course, only an incomplete picture of TCMs in developing countries could be presented, based on tariff charges and QRs on manufacturing import trade. The investigations did not include NTBs like money and finance measures to control imports, state trading monopoly and special entry procedures. Nor could attention be paid to the cumulative impact of the simultaneous application of several TCMs, a quite common phenomenon in many developing countries, and the numerous partial applications and exemptions from TCMs employed. This complexity and intransparency as such makes a precise evaluation of the protection structure in developing countries rather difficult. Nevertheless, if the structure of tariffs and QRs are seen in the context of the GSTP negotiations, some features come to the fore.

The analysis shows that the wide intercountry variations in average tariff levels are largely explained by differences in the level of economic development. A linear tariff reduction entails unequal concessions and foregone Government revenues. Although this is the most relevant for the least developed countries with the highest tariff levels, the analysis shows that there is in fact a sliding scale in tariff levels. To increase the willingness of countries to join a GSTP, it is perhaps recommendable to make the percentage of a linear tariff reduction dependent on a country's income level, or different classes of income levels, such that low-income, high-tariff countries are faced with lower percentage reductions. This procedure balances the concessions and mitigates the loss of government revenues. At the product level, it may also limit the need for exceptions to the general rule.

The data clearly indicate that both tariffs and QRs show a similar structure in affecting different manufacturing sectors, on the understanding, however, that QRs are directed with a relatively higher frequency against imports of capital goods. Thus, consumer goods enjoy a significantly higher level of protection than intermediates and capital goods. The structures of tariffs and QRs are mutually reinforcing. This entails the risk of a shift from tariffs to QRs in the trade regimes. There does not even need to be a deliberate shift. If more than one TCM is present, it is conceivable that reduction in one increases the effectiveness of the other. This holds irrespective of a standstill in the area of NTBs, as is agreed upon during the GSTP negotiations. The results of the analysis suggest that substitution between tariffs and QRs is most relevant for import regimes of capital goods.

In reflecting on the specific structure of protection in developing countries, it is, first of all, of interest to note that relatively labour-intensive industries still enjoy the highest protection, notwithstanding the relative labour abundance in these countries. This clearly indicates the presence of strong defensive forces in first-phase industries in the import-substitution sector. Second, in the case of a linear approach to tariff reduction, exactly these industries are faced with the highest preferential tariff margins. Third, by contrast, preferential tariff margins in favour of developing countries will be the lowest for capital goods, whereas the low level of protection for capital goods provides hardly any incentive to start a large-scale import-substitution process for capital goods in the South. This is the more so if it is realized that the average tariffs on capital goods presented in this study are based on legal tariffs rather than on duties actually applied. In the context of special incentives to promote export of manufactures, tariff exemptions on imports of intermediate inputs and capital goods used in export production have become a regular phenomenon in an increasing number of developing countries (Verbruggen, 1987, Chs. 11-17). In this case, tariff protection and, consequently, a possible preferential tariff margin are even nil. In other words, on the one hand, developing countries' own protection policy has created a hard to dismantle system

of protection favouring consumer industries. On the other hand, probably insufficient incentives are provided to promote South-South trade in capital goods, a major ground in the pleas for a GSTP. Consequently, to give South-South trade in capital goods a real impetus, additional preferential trading arrangements, covering a range of measures, seem necessary.